

Remarks/Arguments

The foregoing amendments and these remarks are made in response to the Office Action dated March 11, 2004.

At the time of the Office Action, claims 1-10 were pending in the application. In the Office Action, claims 1-10 were rejected under the doctrine of obviousness-type double patenting. Claim 2 was rejected under 35 U.S.C. 112, ¶2. Claims 1, 2, 4, 9 and 10 were rejected under 35 U.S.C. § 102(b). Claim 8 was rejected under 35 U.S.C. § 103(a). Further, the Examiner objected to a portion of the disclosure. The objections and rejections are set forth in more detail below.

Objections to the Disclosure

The Examiner objected to the disclosure because of formalities, noting that the issued patent number of application no. 10/021,742 was omitted. As set forth in the Amendments to the Specification section above, the specification has been amended to include the issued patent number. Applicant respectfully submits that the Examiner's objection has been satisfied.

Obviousness-Type Double Patenting Rejection

Claims 1-10 have been rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-41 of U.S. Patent No. 6,635,172, or over claims 1-19 of U.S. Patent No. 6,358,408 or over claims 1-15 of U.S. Patent No. 6,035,704 (collectively referred to as the "ancestor claims"). According to the Examiner, claims 1-10 differ from the ancestor claims in the elimination of clauses pertaining to programmable control interface or programmable circuitry. However, the Examiner stated that the option of the system being automatic or manual is obvious to an ordinarily skilled artisan.

Applicant respectfully disagrees that an automatic system is obvious. The absence of a recitation of a programmable control interface or programmable circuitry in claim 1 is not the only difference between pending claim 1 and the ancestor claims. For instance, claim 1 recites "a discharge housing operatively positioned with respect to the routing conduit to receive pressurized water from the routing conduit and redirect said pressurized water downwardly, whereby discharge of said pressurized water upwardly or laterally, and its associated dangers are avoided during purging of the subterranean pressurized water distribution system." None of the ancestor claims teach or suggest a discharge housing.

Nevertheless, since the term of any patent issuing on the present application, which claims the priority of the applications that issued as U.S. Patent No. 6,635,172, U.S. Patent No. 6,358,408 and U.S. Patent No. 6,035,704, runs with the terms of these prior patents, Applicant submits a terminal disclaimer to obviate the Examiner's obviousness-type double patenting rejection.

Rejection Under 35 U.S.C. 112

Claim 2 was rejected under 35 U.S.C. 112, ¶2 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner noted that it was unclear whether claim 2 is further limiting because claim 1 already recites routing to above-ground.

Applicant has cancelled claim 2 and incorporated the above ground feature into amended claim 1. Therefore, Applicant requests reconsideration and withdrawal of the Examiner's rejection.

Art-Based Claim Rejections

Claims 1, 2, 4, 9 and 10 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,133,622 to Hewlett ("the '622 patent"), which incorporates the disclosure of

U.S. Patent No. 4,721,408 to Hewlett ("the '408 patent") by reference. Claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the '622 patent and the '408 patent in view of U.S. Patent No. 5,002,428 to Shettel. Each of these rejections will be addressed in turn below.

Turning to the 102 rejection, the '622 patent and the '408 patent, even assuming that they are properly combined to form the basis of a 102 rejection, do not teach each and every element of claims 1, 2, 4, 9 and 10. For example, in the case of independent claim 1, the controlled flow passage is free of draining apertures between the inlet and the discharge housing. That is, the flow control passage, between the inlet and the discharge housing, does not contain any normally open holes or apertures that allow water to be released from the system. In contrast, a system like that shown in the '622 or '408 patents or any system used for irrigational purposes must necessarily have draining apertures along the flow controlled passage to release water to the soil. Moreover, draining apertures are to be distinguished from normally sealed openings or ports such as the sampling port, or the ultimate discharge outlet of the flow controlled passage, as disclosed in the present invention.

Claim 1 also indicates that the routing conduit initially directs the pressurized water upwardly. It cannot be said that the water in the routing conduit (noted in the Office Action to be reference no. 32) of the '622 and '408 patents is initially directly upwardly. The specifications of these patents do not teach nor do their drawings show such an arrangement.

In addition, claim 1 recites that the flow controlled passage further includes a discharge housing operatively positioned with respect to the routing conduit to receive pressurized water from the routing conduit and redirect the pressurized water downwardly. No such housing is shown by the '622 and '408 patents. Nor does any of the structure pointed out in the Office Action – housing of discharge pump 40 or housing of filter 44 – redirect the pressurized water downwardly.

Further, claim 1 indicates that the apparatus is connected at its inlet to a pressurized subterranean water distribution system. Notably, none of the references cited by the Examiner

suggest the water source being a pressurized system. For example, the '622 patent states: "[t]he source water may be obtained from any one of a number of different or combined sources, for example, from wells, rivers, lakes, industrial plants, laundries and sewage treatment plants." The '622 patent at col. 4, lines 58-60. None of the listed sources suggest a pressurized system, which is further confirmed by the fact that the system of the '622 patent uses a first pump means 14 to withdraw water from the source through the source pipe 12. The '622 patent at col. 4, lines 61-66. Similarly, the system of the '408 patent uses a means for passing water from source pipe 10 into main delivery conduit 12. The '408 patent at col. 4, lines 45-47.

Finally, Applicant wishes to point out that the '622 patent is directed to a recirculating system. Accordingly, the return conduit of '622 patent is for the purpose of returning water to the source itself. The '622 patent notes: "The water which exits the distribution system 10 from the second end 36 of the return conduit 32 may be routed to a settling pond for future use." The '622 patent at col. 4, lines 42-44. Presumably, the "future use" is by the system itself, which is supported by the subsequent language "or, if properly filtered, it may be passed through the source pipe 12 for distribution." The '622 patent at col. 4, lines 44-46. In contrast, claim 1 of the present application makes clear that water is being purged from the pressurized subterranean water distribution system. In other words, the water in the present system is not being recirculated to its source.

In view of the above, Applicant submits that claim 1 has been distinguished from the disclosures of the '622 and '408 patents. Applicant respectfully submits that the rejections of those claims are traversed. Consequently, all claims depending from claim 1 are necessarily distinguished over those references. Nonetheless, Applicant wishes to point out additional limitations in the rejected dependent claims that further distinguish the present invention over the '622 and '408 patents.

For example, claim 4 recites that the discharge housing mounts directly to the routing conduit. The Examiner states that the routing conduit connects directly to housing of the discharge pump 40 or housing of filter 44 for routing back below ground to the well source. But,

as noted above, the '622 and '408 patents make no mention of a housing. With respect to claims 9 and 10, the Office action directs attention to "drain" conduit 36 downstream of filter and pump housing. Claim 9 recites that pressurized water exiting the discharge housing flows to a drain system. The conduit 36 of the '622 patent is not a discharge housing. Moreover, the '622 patent does not teach a drain system. Rather, the water which exits the distribution system 10 from the second end 36 of the return conduit 32 may be routed to a settling pond for future use (that is, back to the source) or, if properly filtered, it may be passed through the source pipe 12 for distribution (recirculation). Therefore, the '622 and '408 patents do not teach a drain system. Claim 10 notes that the inlet of the drain system is positioned directly below the discharge housing. Again, the '622 and '408 patents do not teach a drain system let alone one that is positioned directly below a discharge housing. Therefore, for these additional reasons, the rejected dependent claims are distinguishable over the '622 and '408 patents.

Turning to the rejection under 35 U.S.C. § 103, the Examiner asserts that claim 8 includes the limitation of programmable control circuitry. According to the rejection, the '622 and '408 patents do not disclose programmable control circuitry, but Shettel teaches programmable control circuitry and, therefore, it would have been obvious to incorporate the programmable circuitry of Shettel into the system of the '622 patent. These references cannot be properly combined to form an obviousness rejection because there is no teaching or suggestion in either of the references of such a combination. Even assuming that Shettel is properly combinable with the '622 and '408 patents, the combination does not teach each element of claim 8. Each of the deficiencies of the '622 and '408 patents, as detailed earlier, are not taught or suggested by Shettel. For example, Shettel does not teach a flow controlled passage that is free of draining apertures between the inlet and the outlet. Therefore, for all of the reasons cited above, claim 8 is not obvious in light of the '622 and '408 patents in view of Shettel. Applicant respectfully submits that the rejection of claim 8 has been overcome.

Allowable Subject Matter

Applicant notes with appreciation the Examiner's comments that claims 3 and 5-7 would be distinguished once the double-patenting issues have been resolved and if amended to incorporate all of the limitations of independent claim 1 from which they depend. Applicant has amended claims 3 and 5 to independent form with the features of claim 1. Claims 6 and 7 depend from allowable claim 5.

New Claims 11-19

New claims 11-19 have been added to present alternative definitions of the invention and present various combinations of patentable features. New independent claims 11, 14, and 16 share a feature of claim 1 that patentably distinguishes these claims over the cited references. Namely, the flow controlled passage or at least the routing conduit is free of draining apertures. Applicant incorporates the arguments made above regarding this feature in connection with claim 1.

Additional patentable features are recited by claim 11. For instance, the flow controlled passage includes a routing conduit that initially directs pressurized water upwardly and then downwardly to a drain system. Further, the drain system is positioned directly below the routing conduit. Again, claim 11 recites that the routing conduit is free of draining apertures. The claims depending from claim 11 recite additional patentable features. Specifically, claim 12 recites that the routing conduit, at least a portion of the drain system, and the flow control valve are enclosed within a housing. Claim 13 notes that the flow controlled passage includes a back flow prevention device.

Independent claim 14 recites a routing conduit that initially directs pressurized water upwardly and then redirects the water downwardly. In addition, claim 14 notes that the flow controlled passage is free of draining apertures. Further, claim 14 indicates that the drain system is subterranean. Claim 14 also states that the routing conduit, at least a portion of the drain

system and a flow control valve are enclosed within a protective cover. Dependent claim 15 further notes that the flow controlled passage includes a back flow prevention device.

Claim 16 recites that the drain system is subterranean and that the flow controlled passage is free of draining apertures between the inlet and the subterranean drain system. Claim 16 also states that the apparatus includes programmable electronic control circuitry. Dependent claim 17 notes that the control circuitry includes a microprocessor system and programming interface operatively connected to the microprocessor system. Claim 18 includes a back flow prevention device, and claim 19 adds an isolation valve.

None of these features, alone or in combination, are shown in the prior art.

Conclusion

In light of the foregoing, it is respectfully submitted that the Examiner's objections and rejections have been overcome. Accordingly, Applicant respectfully requests that the Examiner reconsider the claims currently pending in the application; withdraw the objection to the disclosure, the obviousness-type double patenting rejection and the rejections under 35 U.S.C. §§ 102, 103 and 112; allow the pending claims; and promptly issue a timely Notice of Allowance.

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